

**Notice of Allowability**

Application No.

10/812,867

Examiner

Frederick F. Rosenberger

Applicant(s)

WATANABE, TETSUO

Art Unit

2884

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment and IDS filed 17 February 2006.
2. ☒ The allowed claim(s) is/are 1 and 3-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 2/17/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

### **DETAILED ACTION**

1. Applicant's reply, filed 17 February 2006, has been received and entered.

Accordingly, changes have been made to drawings. Claim 13 has been cancelled. No new claims have been added. Thus, claims 1-12 are currently pending in this application.

2. The drawings were received on 17 February 2006. These drawings are acceptable.

3. Applicant's Information Disclosure Statement, filed 17 February 2005, has noted a reference that has been cited in a Korean Official Letter concerning a Korean patent application. Such reference has been deemed pertinent to claim 1. As such, the allowability of claim 1 has been withdrawn. An Examiner's Amendment follows to incorporate allowable subject matter from claim 2 into claim 1.

### **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Scott D. Malpede (Registration # 32,533) on 6 March 2003.

The application has been amended as follows:

Claim 1 (Currently Amended): A radiation image photographing apparatus configured to detect radiation comprising:

a radiation detecting panel configured to convert received radiation into an electrical signal;

a support substrate configured to support the radiation detecting panel, with a plurality of openings formed on a side of the support substrate opposite to a surface supporting the radiation detecting panel; and

a housing configured to contain the radiation detecting panel and the support substrate; and,

a first reinforcing plate configured to reinforce the support substrate,

wherein the first reinforcing plate is fixed such that the openings can be covered with the first reinforcing plate, and ~~wherein~~ the surface of the support substrate configured to support the radiation detecting panel is flat.

Claim 2 (Cancelled)

Claim 3 (Currently Amended): An apparatus according to claim ~~[[2]]~~ 1, wherein the first reinforcing plate is formed of fiber-reinforced plastics, fiber-reinforced metal, or aluminum alloy.

Claim 4 (Currently Amended): An apparatus according to claim [[2]] 1, wherein an opening is provided in a portion of the first reinforcing plate.

Claim 8 (Currently Amended): An apparatus according to claim [[2]] 1, further comprising a second reinforcing plate configured to oppress warp due to a difference between a linear expansion coefficient of the first reinforcing plate and a linear expansion coefficient of the support substrate, and wherein the second reinforcing plate is located between the support substrate and the radiation detecting panel.

***Allowable Subject Matter***

5. Claims 1 and 3-12 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Claim 1 recites the limitations of a radiation image photographing apparatus comprising a support substrate with a plurality of openings formed on the side of the support substrate opposite a flat surface supporting a radiation detection panel and a reinforcing plate for reinforcing the substrate fixed that the openings in the substrate are covered with the reinforcing plate. This configuration allows a plurality of openings that do not extend through the thickness of the support substrate to be formed (i.e. the surface supporting the radiation detection panel is flat), thereby lowering the weight of

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the apparatus, while a reinforcing plate strengthens the support substrate by covering said openings.

Kengo (JP 2003-014854) teaches a radiation image photographing apparatus with a support substrate with a plurality of openings 5 in the support substrate 4 that do not extend through the thickness of the substrate (Figure 1). While Kengo fills these openings with an X-ray shielding material to attain increased strength and shielding performance, Kengo does not teach or reasonably suggest a reinforcing plate to reinforce the support substrate. As such, applicant's claim 1 is allowed over the prior art. Claims 3-12 are allowed by virtue of their dependence on claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

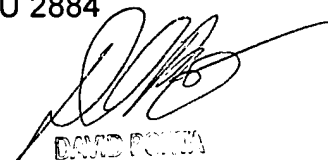
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Rosenberger whose telephone number is 571-272-6107. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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